Chapter Three

The Role of Management and Institution-Specific Factors Associated with Resolutions

Bank resolutions in the late 1980s and early 1990s followed or coincided with periods of serious economic decline and structural change in financial markets. It is easy to attribute the rash of bank resolutions in the 1980s entirely to adverse economic conditions, and the presumption is reinforced by the inordinately large number of failures in particular geographic regions. But virtually all banks underwent the adverse economic conditions and enhanced competition that troubled the 1970s and early 1980s. A majority weathered these circumstances and some even prospered. Analyses of surviving and resolved banks reveal that under almost identical circumstances, management generally plays an important role in determining why one bank survives and another fails.

Ultimately, a bank's management and board of directors and their cumulative decisions are responsible for the success or failure of the institution. Although regulators play a role in shaping the environment in which banks must operate, they cannot claim primary responsibility for the success or failure of a bank.

Management and Bank Failure

A study of banks that were resolved during the 1980s identifies major causes of bank failures by using data from examiners' reports that specifically characterize the quality of managers and boards of directors before resolution. The study contains proprietary data that are generally available only to analysts within banking regulatory agencies.[1] These data include information prepared by bank examiners of the Office of the Comptroller of the Currency (OCC) about the financial status of banks.

The sample used in the study includes 171 resolved banks and represents 94 percent of the resolutions of national banks from 1979 through 1987. In addition to resolutions, the study examines 51 rehabilitated banks--that is, national banks that recovered from a weakened financial state. The locations, external problems, and asset sizes of the rehabilitated banks are similar to those of the resolved banks in the sample and therefore provide a relevant comparison of resolved banks to weakened banks that survived. This study also compares the two groups of rehabilitated and resolved banks to a control group of 28 banks that remained healthy during the period.

The study found that so-called management-driven weaknesses played a "significant role" in the

1. F. Graham and J. Horner, "Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks," *Bank Structure and Competition: Proceedings from the Federal Reserve Bank of Chicago* (1988). Studies testing similar hypotheses using more recent data are not available.

   See also Gary Gorton and Richard Rosen, "Corporate Control, Portfolio Choice and the Decline of Banking," Finance and Economics Discussion Series No. 215 (Board of Governors of the Federal Reserve System, 1992). This study focuses on managerial entrenchment problems contributing to a decline in banks.

decline of 90 percent of the resolved and problem banks in the sample (see Table 2). These results do not imply that 90 percent of bank losses can be attributed to management problems, nor does it mean that different management could have averted 90 percent of bank failures. But in 90 percent of the cases, examiners thought that deficient management, acting in conjunction with other factors, contributed to bank failure. With more effective management, many of these banks could probably have avoided some losses before they badly deteriorated.

Table 2.
The Incidence of Five Areas of Weakness That Figured Prominently in the Decline of National Banks Between 1979 and 1987

Areas of Weakness	Percentage of Total Resolved Banks	Percentage of Rehabilitated Banks (Before recovery)
Policy, Planning, and Management Quality	90	88
Audits, Controls, and Systems	24	24
Asset Quality[a]	98	98
Insider Fraud and Abuse	36	24
Economic Environment	35	39

SOURCE: F. Graham and J. Horner, "Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks," *Bank Structure and Competition: Proceedings from the Federal Reserve Board of Chicago* (1988).

NOTE: About 73 percent of failed banks operated under depressed economic conditions, compared with 50 percent of healthy banks in the sample. But 67 percent of rehabilitated banks operated in depressed local economies after recovery.

a. Asset quality is not independent of management quality.

Although the external causes of bank failure, such as inflation, recession, competition, and volatile interest rates, affected virtually all banks (73 percent of national banks resolved during the 1979-1987 period operated in economically depressed areas), OCC examiners blamed banks' problems on "external economic conditions" in the cases of only 35 percent of those banks that were resolved.[2] But these results must be interpreted cautiously. It is not possible to separate "external economic conditions" neatly from problems of asset quality. These findings for individual bank resolutions are based on subjective evaluations by examiners who set out to list a group of factors contributing to the failure of a particular bank. Even with the most sophisticated techniques, distinguishing between management quality and the economic environment in which banks operate is obviously difficult; the categories are not mutually exclusive.

Ironically, a greater percentage of the rehabilitated banks--39 percent--experienced significant weakness in their economic environment than did the resolved banks; still, these banks recovered (see Table 2). Before they recovered, rehabilitated banks suffered problems similar to those of failed banks. For example, 88 percent of the rehabilitated survivors (compared with 90 percent of failed banks) exhibited significant weaknesses in management policies and controls. About 98 percent of both failed banks and those that were later rehabilitated showed poor asset quality during initial examinations. What dictated resolution or rehabilitation? It cannot be shown conclusively with these data, but it is worth noting that 93 percent of the resolved banks also had significant management problems and that 63 percent had problems with their chief executive officers. By comparison, rehabilitated banks had significant management problems in less than 50 percent of the instances reported, and fewer than 39 percent of the banks had CEO problems.[3] Moreover, when examiners discovered a financially weakened bank that had a chief executive officer who lacked ability or integrity, 90 percent of the rehabilitated banks replaced that CEO. By contrast,

2. Graham and Horner, "Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks."

3. Ibid., p. 406.

Table 3.
Internal Management Factors Contributing to the Failure of National Banks Resolved Between 1979 and 1987

Management Factors	Percentage of Resolved Banks with Management Problems
Nonexistent or Poorly Followed Loan Policies	81
Inadequate Systems to Ensure Compliance with Internal Policies or Banking Laws	69
Inadequate Controls or Supervision of Key Bank Officers or Departments	63
Inadequate Systems to Identify Problem Loans	59
Poor Decisions Made by One Dominant Individual	57
Nonexistent or Poorly Followed Asset and Liability Management Policies	49
Inappropriate Lending Policies	86
Excessive Loan Growth	51
Undue Reliance on Volatile Liabilities	41
Problems Related to Internal Oversight or Management Deficiencies (Accounting inadequacies such as missing financial statements or income information, and so on)	81
Overlending in Relation to Debt-Service Ability of Borrower	72
Collateral-Based Lending and Insufficient Cash Flow Analysis	53
Unwarranted Concentrations of Credit Given to Single Industry	36

SOURCE: F. Graham and J. Horner, "Bank Failure: An Evaluation of the Factors Contributing to the Failure of National Banks," *Bank Structure and Competition: Proceedings from the Federal Reserve Board of Chicago* (1988).

76 percent of those banks that were ultimately resolved did not.[4]

Bank examiners also listed insider fraud and abuse as contributing to the decline of banks in more than one-third of those institutions that they evaluated during the 1979-1987 period (see Table 2). Fraud and abuse problems were linked to a lack of oversight and controls. Another study that examined a sample of 218 resolutions during the 1985-1987 period found fraud and insider abuse in 25 percent of the bank failures.[5] Many of the resolutions from 1987 to 1990 are characterized by excessive asset growth in illiquid assets (notably real estate) several years before failure. Such asset growth is ultimately the result of aggressive loan policies established or condoned by management.

4. Ibid., p. 414.

5. John F. Bovenzi and Arthur J. Murton, "Resolution Costs of Bank Failure," *FDIC Banking Review*, vol. 1, no. 1 (Fall 1988), pp. 1-13.

The major management problems that regulatory examiners listed as directly contributing to the failure of national banks under their supervision between 1979 and 1987 are inefficient handling of loans--including inadequate loan policies, systems to identify problem loans, and systems to ensure compliance with bank policy and law--and deficiencies in accounting (see Table 3).

A Comparison of Resolved and Surviving Banks

The confluence of economic events greatly increased the difficulties that management faced during the 1980s. Some managers reacted poorly to a barrage of unusual situations. Those who adjusted to the rapidly changing market avoided failure and even prospered. The mix of assets in a bank portfolio is one indicator of the way managers reacted to the pressures created by these external factors. In order to investigate the differences between surviving banks and those that have been resolved, the Congressional Budget Office (CBO) compared the behavior of a cohort of similarly sized banks several years before failure. This type of comparison indicates how managers behaved differently, but the available data do not allow for isolating specific factors that caused managers to behave in a certain way.

Because time-series data on market value are not available for most banks, comparing resolved banks with surviving banks is possible only by comparing book-value measures of key financial variables (equity-to-asset ratios, and so on). A comparison of this sort is nevertheless instructive, because even on a book-value basis the two groups have distinguishing characteristics that point to fundamental differences between typical surviving and resolved banks.

The sample for this analysis is composed of small banks with assets of less than $25 million. Banks of this size make up the highest proportion of resolutions among all asset groups during the latter half of the 1980s. For the sake of comparison, the record of these resolved institutions is contrasted with that of similarly sized banks that survived dur-

Table 4.
A Comparison of Portfolio Characteristics of Small Resolved and Surviving Banks, 1987-1989 (In percent)

	Banks Open December 31, 1990	Banks Resolved in 1990
Real Estate Loans as a Share of Total Loans		
1987	39.2	35.9
1988	40.5	37.4
1989	41.3	38.1
Commercial and Industrial Loans as a Share of Total Loans[a]		
1987	18.7	28.7
1988	17.8	27.1
1989	17.2	27.3
Other Loans as a Share of Total Loans[a]		
1987	42.1	35.7
1988	36.7	35.5
1989	41.5	34.6
Securities as a Share of Assets[a]		
1987	30.8	13.4
1988	30.9	15.1
1989	29.5	13.6
Total Loans as a Share of Assets[a]		
1987	47.8	62.8
1988	49.2	61.3
1989	50.1	60.2
Memorandum:		
Sample Size	3,795	60

SOURCE: Congressional Budget Office analysis based on data from the Federal Deposit Insurance Corporation (FDIC) and W.C. Ferguson and Company.

NOTES: Averages are computed among all firms in each sample. Data on failed banks for 1990 indicate data recorded by the FDIC at time of failure and are limited to only a few variables. All percentages are based on end-of-year data.

Sample includes insured banks with the following characteristics:

- o Open and operating by end of 1987
- o 1987 assets less than $25 million at end of 1987
- o Still open in 1990 or resolved in 1990
- o Consistent data series for 1987 through 1989

a. Percentages are significantly different (at the 5 percent level) using analysis of variance (ANOVA) statistical tests.

ing the 1987-1990 period. Historical data on financial characteristics are compared for institutions with assets of less than $25 million at the beginning of 1987 that either remained open through the end of 1990 or were closed in that year.

Management of Portfolio Risk

The riskiness of a portfolio depends on two characteristics--the size of shares in it and how the returns on shares vary. For example, if a bank portfolio is composed of only two types of assets and if the returns on both forms of assets move in the same direction under similar market conditions, they could be volatile (more risky). In this case, the returns on both assets (composing the entire portfolio) will move up or down concurrently. If, instead, the return on one form of asset parallels general economic conditions and the return on the other asset moves inversely with the economy, the returns of the two will be less volatile and hence less risky. Portfolio risk is reduced because changes in the returns offset each other.

The size of asset shares in a portfolio is also important. The larger the share of one type of asset, the more exposed is the whole portfolio to changes in market conditions that affect that type of asset. The rule is simple: to reduce risk, diversify the asset portfolio. Carrying out the rule, however, is an art--it requires training, practice, and instinct.

Differences in the portfolios of the two groups generate two types of comparisons: how the mean portfolio characteristics of the two groups compare, and how these means changed over time--between 1987 and 1989. CBO used a simple analysis of variance (ANOVA) procedure to test whether the means calculated for the surviving banks are significantly different from those of resolved banks for each variable in each year observed (see Table 4). The share of real estate loans as a percentage of total loans is not statistically different from 1987 to 1989, but shares of commercial loans and securities test significantly different in each year.

Although book-value measures are only an approximate measure of market value, a number of the portfolio characteristics appear to distinguish the two groups as early as three years before the resolu-

Table 5.
Assets, Capitalization, and Profitability: A Comparison of Historical Characteristics of Small Resolved and Surviving Banks, 1987-1989

	Banks Open December 31, 1990	Banks Resolved in 1990
Assets and Equity (Thousands of dollars)		
Assets in		
1987	15,105	16,021
1988	16,656	16,629
1989	18,051[a]	15,359[a]
1990	19,660[a]	14,541[a]
Equity in		
1987	1,497[a]	1,136[a]
1988	1,576[a]	788[a]
1989	1,668[a]	125[a]
Capitalization (Percent)[a]		
Equity as a Share of Assets in		
1987	12.0	7.5
1988	10.2	4.8
1989	9.9	0.6
Profitability (Percent)[a]		
Net Income as a Share of Assets in		
1987	0.41	-1.96
1988	0.56	-2.36
Memorandum:		
Sample Size	3,795	60

SOURCE: Congressional Budget Office analysis based on data from the Federal Deposit Insurance Corporation (FDIC) and W.C. Ferguson and Company.

NOTES: Averages are computed among all firms in each sample. Data on failed banks for 1990 indicate data recorded by the FDIC at time of failure and are limited to only a few variables. All figures use end-of-year data.

Sample includes insured banks with the following characteristics:

- o Open and operating by end of 1987
- o 1987 assets less than $25 million at end of 1987
- o Still open in 1990 or resolved in 1990
- o Consistent data series for 1987 through 1989

a. Figures are significantly different (at the 5 percent level) using analysis of variance (ANOVA) statistical tests. Tests indicate whether the means of the distributions of open and resolved banks are statistically different in each year.

tion of a failed bank (see Table 4). Resolved banks held more than 60 percent of their assets in loans, a relatively illiquid form of asset. Survivors held 50 percent or less of their assets in loans, thereby maintaining greater flexibility in their portfolios to handle temporary problems with liquidity. Banks that were resolved not only held a larger share of loans in their asset portfolio, but also held lower asset shares of securities than banks that survived the period. Consequently, surviving banks were more diversified and exposed to less overall risk.

Paradoxically, real estate loans as a percentage of total loans were slightly higher (although not significantly so) for surviving banks than for resolved banks (see Table 4). Further investigation of the data, however, reveals that failed banks in Texas, for example, held a higher percentage of real estate loans (particularly commercial real estate) than surviving banks. Commercial mortgages are generally regarded as more risky than residential mortgages. Moreover, real estate loans were not equally risky in all regions. Small surviving banks as a group increased real estate loans and decreased commercial loans as a percentage of loans over the period as long as these types of loans continued to accrue.

Asset Growth and Profitability

The average equity-to-asset ratio for the small banks that were resolved in 1990 was well above capital adequacy requirements only three years before resolution (see Table 5). By comparison, the average equity-to-asset ratio for banks that survived through 1990 was 60 percent higher in 1987 (12 percent) than for institutions in the sample that were resolved by the FDIC. Both failing and surviving banks experienced an annual decline in equity-to-asset ratios over the 1987-1990 period. But the drop in capitalization for the failed banks was precipitous, a result that is not peculiar to this sample of resolved banks; other studies show a similar pattern of decay for different cohorts of failed banks.[6]

6. See George E. French, "Early Corrective Action for Troubled Banks," *FDIC Banking Review*, vol. 4, no. 2 (Fall 1991), pp. 1-12.

Because equity-to-asset values are expressed in book-value terms, the rapid decay apparent in book-value equity-to-asset ratios may not indicate the true rate of decline in market value for small banks that were resolved in 1990. In fact, the initial market-value ratio of these banks may have been lower than recorded book values in 1987. It is possible that many of the small banks that ultimately failed and were resolved in 1990 could not overcome the

Table 6.
Assets and Capitalization: A Comparison of Annual Growth Rates of Small Resolved and Surviving Banks, 1987-1989 (In percent)

Growth Characteristics	Annual Growth Rate[a] Banks Open December 31, 1990	Banks Resolved in 1990
Assets in		
1987-1988	12.2	5.0
1988-1989	7.8	-6.9
Equity in		
1987-1988	7.2	-30.4
1988-1989	7.1	-91.0
Equity as a Share of Assets in[b]		
1987-1988	-14.6	-36.6
1988-1989	-3.0	-87.0
Memorandum:		
Sample Size	3,795	60

SOURCE: Congressional Budget Office analysis based on data from the Federal Deposit Insurance Corporation and W.C. Ferguson and Company.

NOTE: Sample includes insured banks with the following characteristics:

- o Open and operating by end of 1987
- o 1987 assets less than $25 million at end of 1987
- o Still open in 1990 or resolved in 1990
- o Consistent data series for 1987 through 1989.

a. Figures are significantly different (at the 5 percent level) using analysis of variance (ANOVA) statistical tests. Tests indicate whether the means of the distributions of open and resolved banks are statistically different in each year. All figures use end-of-year data.

b. The rate of growth calculated using the weighted average of equity-to-asset ratios. All other averages are computed among all firms in each sample.

embedded losses that they incurred before 1987. Without market data on individual banks, there is no clear way to determine which event best describes reality. Data indicate that these banks were suffering income losses as early as 1987, when the average return on assets was a negative 2 percent (see Table 5). Moreover, for the next two years the average return on assets for the institutions resolved in 1990 remained negative.

It is also possible that losses may not have been entirely embedded. Although earnings were suffering, the average equity-to-asset ratio in the group was 7.5 percent in 1987. One year later, the average equity-to-asset ratio was less than 5 percent. Generally, weakly capitalized banks attempt to increase capital ratios by increasing income or reducing assets. At least initially, the banks destined for resolution in 1990 apparently did not opt to reduce assets; the average growth in assets between 1987 and 1988 was 5 percent (see Table 6). By 1989, however, the small banks that were destined to fail and be resolved in 1990 experienced a large decline in the value of assets. In some cases, banks may have sold profitable assets to improve capitalization. It is also very likely that as examiners began to recognize problems, they forced these banks to write down some of their bad assets as a loss. Assets of the average small bank that was resolved in 1990 declined from more than $16.6 million in 1988 to $14.5 million by the time of resolution.

In this sample, the average bank that was resolved in 1990 displayed losses in net income for at least three consecutive years before resolution. The average equity of small banks resolved in 1990 declined by 30 percent between 1987 and 1988 and by more than 90 percent from 1988 to 1989. Equity grew at an average annual rate of 7 percent for banks that survived the period. Losses in net income and significant reductions in equity clearly indicate that the average small bank that was resolved in 1990 was in serious financial difficulty at least three years before resolution. Although some asset reduction began as early as two years before failure, it was not sufficient to raise equity-to-asset ratios or circumvent the income losses that eventually took place in resolved banks.

Some institutions were able to recover from a position of being poorly capitalized. The recovery of a bank from a status of undercapitalization depends upon the institution's capability to generate profits, reduce assets, and issue external equity.

Do Weakly Capitalized Banks Recover?

In 1985, federal banking regulators established a minimum primary capital-to-asset ratio of 5.5 percent for all commercial banks. Primary capital can be thought of as actual equity available to absorb losses in case of failure. It consists of common equity, perpetual preferred stock, and minority interest in equity accounts of consolidated subsidiaries (it does not include goodwill).

A 1990 study shows that the number of banks that fell below a primary capital ratio of 5.5 percent almost tripled between 1985 and 1988, and as many as 455 banks fell below the minimum equity-to-asset ratio at the end of 1988.[7] From 1981 to 1988, capital-to-asset ratios of about 1,500 banks fell below 5.5 percent. About 45 percent of these banks recovered fully, their capital-to-asset ratios exceeding 5.5 percent. Some 36 percent were resolved and the remaining 19 percent remained weakly capitalized. The 1990 study tests the hypothesis that the likelihood and speed of recovery are not affected by near-term earnings, nor are they influenced by the ability to raise capital by issuing external equity. The study rejects this hypothesis and concludes that banks that have positive earnings and can raise capital usually do not require resolution.

Another study published in 1991 examines a group of commercial banks, the primary capital ratios of which remained less than 5.5 percent for more than four consecutive quarters between 1985 and 1989.[8] This study shows that only 24 percent of the banks that remained undercapitalized for

7. M. Spivey and D. Dahl, "An Examination of the Efforts of Commercial Banks to Recover from Undercapitalization" (paper presented at the annual meeting of the Financial Management Association, Orlando, Florida, 1990).

8. R. Alton Gilbert, "Supervision of Undercapitalized Banks: Is There a Case for Change?" in Federal Reserve Bank of Chicago, *Rebuilding Banking: Proceedings of the 27th Annual Conference on Bank Structure and Competition, May 1-3, 1991*, pp. 335-357.

more than a year were able to increase their capital ratio sufficiently to recover by the end of 1989. The study also adds an important regional insight. The ability to recover from weak capitalization was much greater for banks outside those energy-producing states that were experiencing a decline at the time. In this study, only 10 percent of the banks in Louisiana, Texas, and Oklahoma were able to recover, although the recovery rate was 46 percent for banks located outside this region.

The Effectiveness of Early Closure. The Federal Deposit Insurance Corporation Improvement Act of 1991 authorizes the FDIC to resolve banks that dip below tangible equity-to-asset ratios of 2 percent measured as book value. One way to assess the potential effectiveness of a rigidly imposed early closure rule is to examine the record of failure and recovery of banks whose equity-to-asset ratios fell below 2 percent. Of the 235 banks in the industry that dropped below equity-to-asset ratios of 2 percent at the end of 1988, only 36 banks, or 15 percent, were still operating as of June 30, 1991.

The financial characteristics of these 36 surviving banks indicate that those that recovered from below the threshold of 2 percent equity were relatively small, holding less than $80 million in assets. Only one of these institutions held assets greater than $500 million. A prominent characteristic of the survivors was the ability to raise capital. Total equity for the group was only $31 million by the end of 1988. By June 1991, surviving banks had increased their equity more than fourfold, to $152 million. The average surviving bank was able to raise $3.9 million in two and one-half years. Equity-to-asset ratios for the average bank increased from 1 percent by the end of 1988 to 5 percent by June 1991.

These banks added equity largely by issuing new common stock and selling bank-held stock at above-par value. Book-value accounting conventions value stock at par value unless the stock is sold. If the market value of stock exceeds par value, selling the stock will raise additional equity. Issues of new common stock amounted to about $21 million, and the amount received from the sale of old common stock in excess of par or stated value amounted to $79 million.